



PTO/SB/CB3/b (08-03)

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<b>Substitute for form 1449A/B/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)				<b>Complete If Known</b>	
				Application Number	10/656531
				Filing Date	September 5, 2003
				First Named Inventor	David Baltimore
				Art Unit	1645
				Examiner Name	Not Yet Assigned
Sheet	1	of	1	Attorney Docket Number	CTCH-P01-016

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
CM	AU	US-2004/0121357-A1	06-24-2004	Franklin, S.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>3</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				

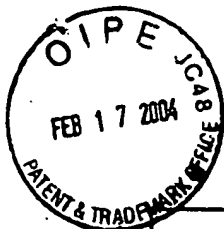
\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 801.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
CM	CT1	Kim., Y. et al. Hybrid restriction enzymes: Zinc finger fusions to Fok I cleavage domain. <i>Proc. Natl. Acad. Sci. USA</i> 93:1156-1160 (1996).			

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				Art Unit	N/A
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		Number-Kind Code <sup>2</sup>	(if known)			
CA	AA	US-4,665,184		05-12-1987	Dervan, P. et al.	
	AB	US-4,795,700		06-03-1989	Dervan, P. et al.	
	AC	US-4,942,227		07-17-1990	Dervan, P. et al.	
	AD	US-5,356,802		10-18-1994	Chandrasegaran, S.	
	AE	US-5,436,150		07-25-1995	Chandrasegaran, S.	
	AF	US-5,487,994		01-30-1996	Chandrasegaran, S.	
	AG	US-5,789,155		08-04-1998	Dervan, P. et al.	
	AH	US-5,792,640		08-11-1998	Chandrasegaran, S.	
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	AJ	US-6,007,988		12-28-1999	Choo, Y. et al.	
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	AL	US-6,140,466		10-31-2000	Barbas, C. et al.	
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AQ	US-6,534,261-B1		03-18-2003	Cox, G. N. et al.		
CA	AR	US-2002/0107214-A1		08-08-2002	Chouluka, A. et al.	
	AS	US-2002/0110898-A1		08-15-2002	Chouluka, A. et al.	
	AT	US-2003/0232410-A1		12-18-2003	Liljedahl, M. et al.	

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		Country Code <sup>3</sup>	Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				
CA	BA	WO-98/53058		11-26-1998	Medical Research Council		
	BB	WO-98/53059		11-26-1998	Medical Research Council		
	BC	WO-98/53060		11-26-1998	Medical Research Council		
	BD	WO-00/46385		08-10-2000	The Children's Medical Center Corporation		
	BE	WO-00/46386		08-10-2000	The Children's Medical Center Corporation		
MA	BF	WO-03/080809		10-02-2003	Stell		
	BG	WO-03/087341		10-23-2003	The University of Utah Research Foundation		

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		Art Unit	N/A		
		Examiner Name	Not Yet Assigned		
Sheet	2	of	3	Attorney Docket Number	CTCH-P01-016

CA	Bibikova, M. et al. Stimulation of Homologous Recombination through Targeted Cleavage by Chimeric Nucleases. Molecular and Cellular Biology 21:1, 289-97 (2001)
CB	Bibikova, M. et al. Targeted Chromosomal Cleavage and Mutagenesis in Drosophila Using Zinc-Finger Nucleases. Genetics 161:1169-75 (2002)
CC	Bitinaite, J. et al. FokI dimerization is required for DNA cleavage. Proc. Natl. Acad. Sci. 95:10570-75 (1998)
CD	Brenneman, M. et al. Stimulation of intrachromosomal homologous recombination in human cells by electroporation with site-specific endonucleases. Proc. Natl. Acad. Sci. USA 93, 3608-12 (1996)
CE	Chandrasegaran S. et al. Chimeric Restriction Enzymes: What Is Next? J. Biol. Chem. 274:841-8 (1999)
CF	Chevalier, B. et al. Design, Activity, and Structure of a Highly Specific Artificial Endonuclease. Molecular Cell. 10:895-905 (2002)
CG	Choulika, A. et al. Induction of Homologous Recombination in Mammalian Chromosome by Using the I-SceI System of Saccharomyces cerevisiae. Molecular and Cellular Biology. 15:4, 1968-73 (1995)
CH	Cohen-Tannoudji, M. et al. I-SceI-Induced Gene Replacement at a Natural Locus in Embryonic Stem Cells. Molecular and Cellular Biology. 18:3, 1444-48 (1998)
CI	Desjarlais, J.R. et al. Toward rules relating zinc finger protein sequences and DNA binding site preferences. Proc. Natl. Acad. Sci. USA 89, 7345-49 (1992)
CJ	Donoho, G. et al. Analysis of Gene Targeting and Intrachromosomal Homologous Recombination Stimulated by Genomic Double-Strand Breaks in Mouse Embryonic Stem Cells. 18:7, 4070-78 (1998)
CK	Dreier, B. et al. Development of Zinc Finger Domains for Recognition of the 5'-ANN-3' Family of DNA Sequences and Their Use in the Construction of Artificial Transcription Factors. Journal of Biological Chemistry. 276:31, 29466-078 (2001)
CL	Elliott, B. et al. Gene Conversion Tracts from Double-Strand Break Repair in Mammalian Cells. Molecular and Cellular Biology. 18:1, 93-101 (1998)
CM	Elrod-Erickson et al. Binding Studies with Mutants of Zif268. J. of Biol. Chem. 274:27, 19281-85 (1999)
CN	Gorlich, D. et al. Nucleocytoplasmic Transport. Science. 271, 1513-18 (1996)
CO	Greisman, H. et al. A General Strategy for Selecting High-Affinity Zinc Finger Proteins for Diverse DNA Target Sites. Science. 275, 657-61 (1997)
CP	Hicks, G. et al. Three Classes of Nuclear Import Signals Bind to Plant Nuclei. Plant Physiol. 107:1055-58 (1995)
CQ	Huang, B. et al. Splase: A New Class IIS Zinc-Finger Restriction Endonuclease with Specificity for Sp1 Binding Sites. Journal of Protein Chemistry. 15:5, 481-89 (1996)
CR	Johnson, R.D. et al. Double-strand-break-induced homologous recombination in mammalian cells. Biochemical Society Transactions 29, 196-201 (2001)
CS	Khanna, K. et al. DNA double-strand breaks: signaling, repair and the cancer connection. Nature Genetics. 27:247-54 (2001)
CT	Kim, Y. et al. Chimeric restriction endonuclease. Proc. Natl. Acad. Sci. 91, 883-87 (1994)
CU	Kim, Y. et al. Chimeric Restriction Enzyme: Gal4 Fusion to FokI Cleavage Domain. J. Biol. Chem. 273, 489-5. (1998)
CV	Kim, Y. et al. Insertion and Deletion Mutants of KofI Restriction Endonuclease. Journal of Biological Chemistry 269:50, 31978-82 (1994)
CW	Li, L. et al. Alteration of the cleavage distance of Fok I restriction endonuclease by insertion mutagenesis. Proc. Natl. Acad. Sci. 90, 2764-68 (1993)
CX	Li, L. et al. Functional domains in Fok I restriction endonuclease. Proc. Natl. Acad. Sci. 89, 4275-79 (1992)
CY	Liu, Q. et al. Validated Zinc Finger Protein Designs for All 16 GNN DNA Triplet Targets. J.

Examiner Signature	<i>C. Baltimore</i>	Date Considered	5/6/05
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		Biol. Chem. 277:6, 3850-56 (2002)	
CZ		Mattaj, I. et al. Nucleocytoplasmic Transport: The Soluble Phase. Annu. Rev. Biochem. 67:265-306 (1998).	
CA1		Nahon, E. et al. Targeting a truncated Ho-endonuclease of yeast to novel DNA sites with foreign zinc fingers. Nucleic Acids Research, 26:5, 1233-39 (1998)	
CB1		Porteus, M. et al. Chimeric Nucleases Stimulate Gene Targeting in Human Cells. Science 300:763 (2003)	
CC1		Rebar, E. et al. Zinc Finger Phage: Affinity Selection of Fingers with New DNA-Binding Specificities. Science. 263, 671-73 (1994)	
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CF1		Sargent, R. G. et al. Repair of Site-Specific Double-Strand Breaks in a Mammalian Chromosome by Homologous and Illegitimate Recombination. Molecular and Cellular Biology. 17:1, 267-77 (1997)	
CG1		Segal, D.J. Endonuclease-induced, targeted homologous extrachromosomal recombination in Xenopus oocytes. Proc. Natl. Acad. Sci. 92, 806-10 (1995)	
CH1		Segal, David J. Toward controlling gene expression at will: Selection and design of zinc finger domains recognizing each of the 5'-GNN-3' DNA target sequences. Proc. Natl. Acad. Sci. USA. 96, 2758-63 (1999)	
CI1		Sera, T. et al. Rational Design of Artificial Zinc-Finger Proteins Using a Nondegenerate Recognition Code Table. Biochemistry. 41, 7074-81 (2002)	
CJ1		Shi, Y. et al. Specific DNA-RNA Hybrid Binding by Zinc Finger Proteins. Science. 268, 282-84 (1995)	
CK1		Smih, F. et al. Double-strand breaks at the target locus stimulate gene targeting in embryonic stem cells. Nucleic Acids Research. 23:24, 5012-19 (1995)	
CL1		Smith, J. et al. A detailed study of the substrate specificity of a chimeric restriction enzyme. Nucleic Acids Research, 27:2, 674-81 (1999)	
CM1		Smith, J. et al. Requirements for double-strand cleavage by chimeric restriction enzymes with zinc finger DNA-recognition domains. Nucleic Acids Research, 28:17, 3361-69 (2000)	
CN1		Taghian, D.G. et al. Chromosomal Double-Strand Breaks Induce Gene Conversion at High Frequency in Mammalian Cells. Molecular and Cellular Biology. 17:11, 6386-393 (1997)	
CO1		Wah, D. A. et al. Structure of the multimodular endonuclease FokI bound to DNA. Nature 388: 97-100 (1997)	
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CR1		Yanez, R. et al. Therapeutic gene targeting. Gene Therapy. 5, 149-59 (1998)	
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